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ABSTRACT

The aim of the conference reported in this document was to agree on a small set of education indicators that the 22 participating countries could jointly pursue over the next 5 years. Participants discussed methodological problems involved in making cross-national comparisons of outcomes of education; summarized the statistical activities underway in their countries concerning the use of performance indicators; and described sources of statistical data on education outcomes, resources, and student context of education. Two papers presented at the conference are given in full: (1) "Remarks to the International Conference on Education Indicators" (Emerson J. Elliott); and (2) "U.S. Education Reform and International Data" (Chester E. Finn, Jr.), while a "Summary Report on Cross-National Education Indicators" (Secretariat of the Organisation of Economic Cooperation and Development) provides a day by day, session by session account of the conference, concluding with a description of the need for further discussions on specific subject areas in order to arrive at working definitions for a set of indicators. The conference agenda is provided, and the titles of papers presented and delegate names and addresses are listed. (TJH)

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NATIONAL CENTER FOR EDUCATION STATISTICS

Conference Report August 1988

International Conference on Cross-National Education Indicators

November 3–6, 1987

Jointly sponsored by
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U.S. Department of Education
William J. Bennett
Secretary

Office of Educational Research and Improvement
Chester E. Finn, Jr.
Assistant Secretary

National Center for Education Statistics
Emerson J. Elliott
Acting Commissioner

National Center for Education Statistics

"The purpose of the Center shall be to collect, and analyze, and disseminate statistics and other data related to education in the United States and in other nations."—Section 406 (b) of the General Education Provisions Act, as amended (20 U.S.C. 1221e–1).

NOTE: The name of the Center for Education Statistics (CES) has been changed to the National Center for Education Statistics (NCES). Because this report was written before the name was changed, all references are to the Center for Education Statistics or CES.

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FOREWORD

Recent attempts to describe the status of education in the United States have been plagued by a lack of comparable information about education in other highly industrial countries. Consequently, officials of the U.S. Department of Education, Center for Education Statistics, initiated a conference with participating countries of the Organization for Economic Co-operation and Development (OECD) to discuss possible approaches to developing comparable statistics. The conference was held November 3-6, 1987 in Washington, D.C., and was attended by participants from 22 countries who have responsibility for the development of policy regarding the collection and reporting of information about education.

The aim of the conference was to agree on a small set of indicators that the participating countries could pursue jointly over the next 5 years. To reach this goal, all countries would need to reach accord on the indicators and some countries might need to consider new data collection activities in order to report comparable cross-national indicators.

A number of speakers with experience in previous cross-national comparisons were invited to share their experience with the OECD member country representatives through papers and speeches. These presentations covered ideas about education indicators, methodological problems of making cross-national comparisons of outcomes of education, and thoughts on the measurement of education outcomes, resources, and context of educational practices.

The participants were enthusiastic about the possibility of jointly developing cross-national education indicators but were unable to arrive at a consensus for immediate implementation. The summary of the results of the meeting, included in this collection, describes the need for further discussions on specific subject areas in order to arrive at working definitions for a set of indicators. Although agreement on specific indicators was not reached, the conference opened new discussions about steps that could be taken by OECD members to increase the availability of international comparisons on education outcomes, resources, and context.

Participants of the meeting were asked to summarize the statistical activities underway in their countries on the use of performance indicators and to describe sources of statistical data on education outcomes, resources, and student context of education. Copies of the papers prepared by the speakers and country representatives can be obtained by writing to the National Center for Education Statistics (NCES) or to the OECD in Paris. The addresses of NCES, the OECD Secretariat, and all participants are in appendix C.

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1

REMARKS TO THE INTERNATIONAL CONFERENCE ON EDUCATION INDICATORS

Emerson J. Elliott
Director
Center for Education Statistics

Since the United States proposed this conference, it may be useful for me to comment at the outset on 1) how we view education indicators in the United States and their possible utility in an international setting and 2) what we would like to see emerge as a result of this conference.

The United States is in the midst of efforts, discussed at previous meetings of OECD, to strengthen the rigor of its education system and increase the achievement of its pupils. Those efforts have raised questions for policymakers about what happens next. For example:

- Will tougher curricula conflict with goals to reduce dropouts?
- What effect will new standards for teachers have on the demographic composition of the teacher work force?
- Will pay incentives keep teachers from leaving the profession?

Policymakers in our State capitals are realizing that such questions can be answered only if data are provided to monitor the progress of education reform. Our State governors, in their national association, have initiated a project to follow such data for at least 5 years. Our chief State school administrators have called for comparable data across States.

For several years, we at the Center for Education Statistics have pursued a data reporting project that describes the health of education by collecting information about

- what our students know and what level of skills they possess;
- the quality of educational processes, especially those processes that have strong correlations with outcomes; and
- the educational needs of students and the policy context for education as expressed in government action.

We try to distinguish "indicators" of the health of education from more traditional measures such as the number of students, size of school, or level of expenditures. We see indicators as statistical measures that show relationships such as

- trends over time;
- measures of one State compared with another or schools sharing similar characteristics compared with each other; and
- comparisons of achievements against goals.

Education indicators draw, where possible, on findings from education research. They serve as signposts or benchmarks. They can help provide a fuller understanding of how our educational systems are functioning by identifying the high spots or the low spots, both of which are the places we should examine closely.

In the United States, we find keen interest in information that places American measures side-by-side with those of other nations--not because we want to hold someone accountable, or want to run an international academic olympics, but because we expect to find differences that will give us something to ponder, that will enable us to question our own actions, that will let us assess whether a practice of another country might fit here, or that will cause us to reject them because they do not seem to fit our situation.

Let me cite an example:

The United States and Japan have recently completed extensive studies of each other's education systems. One major conclusion the U.S. Secretary of Education drew from this work was that we have been badly served by the American tendency to reject the lessons of Japanese education on the ground "the culture is so different." The Secretary found a dozen practical lessons from the study and urged Americans to look for "principles, emphases, and relationships" that are compatible with American values. Among other lessons was one on the amount of time devoted to education--it is much greater in Japan than in the United States. But that information was harder to find than simply looking at the "number of days in school"--it required a deeper look at days and half-days, out-of-school time and tutoring in "juku" programs, and the efficient management of class time in school. The information we gained from this study is very timely as American schools look for ways to increase effective learning time for students.

It is obvious from the papers prepared for this conference that many of us have questions about the utility of cross-national data, how that data might be used, the various ways of explaining reasons for differences, and other matters. I said

"many of us" because the United States as a country also has such questions and, in fact, several of these questions were included in the briefing paper sent to you for this meeting.

But I have seen the care that the International Association for the Evaluation of Educational Achievement (IEA) has given to such questions internationally, developing, for example, a concept called "opportunity to learn" that permits comparisons of achievement by taking differences among curricula into account. Moreover, I can assure you that most of these questions are ones regularly raised when we gather data from our States and report them--data such as populations, goals, values, and resources, and how they are accounted for and reported.

I have learned that when government leaders press their questions repeatedly enough, there can be a response. Such questions can be addressed.

Let's set out to do that.

A year ago--even 6 months ago--we thought we would be fortunate if 6 or 8 nations, perhaps 12 or 15 participants, came to this meeting. We have three times that many, and I am both amazed and pleased. (I hope OECD is also.) Because of the strong interest demonstrated by your presence here and the papers you have prepared, I think it is realistic to state a goal for this conference.

The goal is that we agree here to embark on an exchange of data on measures of the progress and trends (or "health") of education. More specifically, such an agreement might:

- include those nations that express interest, although perhaps not all those represented here will wish to join in;

- cover several indicators, perhaps 5 to 7, with additional ones selected for further examination;

- commit participating nations to support any necessary technical staff work to deal with details that will inform users about the degree of comparability in any indicators reported across nations; and

- call for a report to the OECD education committee meeting in December as to the results of our work this week, with recommendations for appropriate, continuing involvement of OECD in this activity.

This may add to the annual data collection of OECD, but I want to emphasize that there is intended to be nothing in these suggestions that would require additional data collections in any country unless it wished to do so. The point is to use information that is already available or is scheduled to become available.

I want to make this suggestion today, at the beginning of our discussions, so that each of us can think toward the next steps that might be taken. I am sure the views of all of us will be shaped by these sessions, and, as the discussions proceed, we will achieve better understanding.

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U.S. EDUCATION REFORM AND INTERNATIONAL DATA

Chester E. Finn, Jr.
Assistant Secretary for Educational Research and Improvement and
Counselor to the Secretary

I am pleased to be talking with a group that could lay the groundwork for increasing the quantity and quality of information about the schooling of youngsters around the world. Americans are extraordinarily interested in this. International studies of education have served as a stimulus (sometimes on the level of an electric shock) for some of the education reforms currently underway in the U.S. We believe they can catalyze and inform more such.

The 1980s have been a time of extraordinary educational ferment and change in this country. We have been swept up in a massive education reform movement for over half a decade, and the momentum shows no sign of abating; in fact, it seems to be accelerating. Americans consistently put education among the top three or four most important issues facing the Nation, and Southern legislators recently pegged education as the number one domestic policy concern among voters. In September, we witnessed an unprecedented event: the first-ever debate among Presidential candidates to focus exclusively on education.

Education has never been more important to Americans, and the need for systematic feedback on the performance of our education system has never been greater. Before elaborating on this need, and some of the ways that cross-national data can help fulfill it, I'd like to recapitulate a few of the changes that have occurred in American education over the past decade. It is functional to categorize six facets of the reform movement currently underway. I also tend to think of them as six fronts in the war on educational mediocrity.

The first front got started in the 1970s, when schools began marching their students back to the basics. This renewed emphasis on the three Rs (reading, writing, and arithmetic) carried over into the 1980's and is still very much with us. States and districts have fallen into line by raising standards and testing minimum literacy and math competencies, first of students, then often of teachers as well. We still have a distance to go here, but we are making respectable progress, so much so that attention is shifting increasingly to reasoning, analyzing, and the other higher order skills that rest atop the basics.

On the second front, we encounter the many issues pertaining to school professionals (teachers, principals, and others): where to find them, how to prepare and certify them, how to tell if they are good at what they do, how and at what levels to compensate them, how to make them more professional, how (if at all) to distinguish among them, what to do about bad ones, how teachers should relate to principals, and so forth. The most visible effort in recent years has been the Carnegie proposal to create a national--but not administered by the government--teacher certification board. Another important development is New Jersey's statewide "alternate certification" program for new teachers, which is attracting hundreds of well qualified persons into the classroom--individuals who had <u>not</u> prepared to be teachers when they attended college. A growing number of education reforms are calling for a fundamental restructuring of the schools in America, a change that would focus even more attention on the professionalism of the people in them.

The third front is school effectiveness. Research has revealed what many of us suspected all along: that certain key elements are usually found in successful schools--characteristics such as a shared sense of purpose, an ethos of achievement, vigorous team spirit, and a clear, coherent curriculum. And effective schools are well led, usually by a principal who has a clear vision of the school's mission; who successfully articulates that vision to teachers, community and students; and who, through his or her daily routines, creates conditions to make that vision a reality.

The fourth front is educational equity, which has been conspicuous on the policy horizon for over 20 years but which has lately raised its profile. Special education is not new; dropout prevention programs are in place in many school systems; so are compensatory programs of many kinds. In the past, however, the dominant equity concern was furnishing greater "<u>access</u>" to educational resources and services for students who may not previously have had their share. But we have come to realize that access does not ensure achievement, and that resources do not guarantee student learning. Outcomes, after all, are what matter. Providing truly equal opportunity for all youngsters means setting serious standards for <u>all</u> students and doing our utmost to enable them to achieve those standards.

The fifth front is the newest; it has to do with content: facts and concepts. . . knowledge. This concern is deepening as the evidence of ignorance mounts. In 1986, the first assessment of U.S. students' knowledge of American history and literature yielded startling results:

- One in three of our high school juniors thinks Christopher Columbus reached America after 1750. The same number have no clue when the Declaration of Independence was signed, or who Aesop, Atlas, or Cain and Abel are.

- Two out of five cannot guess the meaning of "checks and balances," a central concept to our system of government. Approximately the same portion, 40 percent, don't know who wrote The Iliad, or what The Scarlet Letter, Moby Dick, or The Red Badge of Courage are about.

- Barely one out of three can identify the 50-year period surrounding the time in which our Civil War was fought.

- These kinds of questions produced average scores of 55 percent in history and 52 in literature--obviously failing grades.

There is a growing consensus in this country that the facts and concepts of history, geography, and literature ought to be part of what our children learn in school. So should essential knowledge of other core subjects. Many States and school districts in the United States have raised course requirements in the sciences and mathematics, among others, which is a step in the right direction. But it is not enough to earn four credits of English, three in mathematics and three in science. We need to make sure that all students master specific cognitive skills and knowledge at each grade level. This brings me to the sixth front of education reform in the U.S.: accountability.

In September, Secretary Bennett called on the nation's leaders to make accountability the theme of the year's education debate. Americans already want greater accountability in the education system. Over 70 percent say they want student achievement test results reported so that comparisons can be made State-by-State and school-by-school. Three out of four believe that student performance on academic achievement tests should be a condition for promotion from one grade to the next.

Accountability involves two elements: 1) information as to whether one's education goals are in fact being obtained and 2) consequences linked to the results. It means consequences not only for students, but also for schools and for the people working in them and the policy units of which they are a part. The idea is that schools should be rewarded for increasing the academic gains of their students. And schools that fail to produce measurable gains in students' learning need to be changed.

A growing number of States hold public ceremonies in which governors and other State officials present awards, trophies, and sometimes even cash bonuses to schools that have produced outstanding gains in student achievement. Even more States have laws that permit them to withhold funds or remove officials from schools or districts where student performance remains poor.

In the United States, the main responsibility for such interventions and incentives lies with the State and local governments. In our country, education has always been a State

and local responsibility. Each of the 50 States sets its own education policies, and some 15,000 school districts carry out those policies (not to mention nearly 28,000 private schools). The national government's main role, at least with regard to elementary and secondary education, is to provide periodic checkups on the health of the overall system and to report these findings to educators, policymakers, parents, and citizens.

The U.S. Department of Education collects statistics and other forms of information on various features of the education system. By far the most important of these have to do with student outcomes, student achievement, student learning. This is the indispensable baseline for accountability, and there is a major push in this country to upgrade the National Assessment of Educational Progress, one of our main sources of information on how well our students and schools are doing. We have proposed changes in the national assessment that would allow comparisons of student performance to be made among States. This is a radical, historic change. But we would like to take it a step further. We want to make it possible for States to compare their student performance with that of other countries. If California wants to appraise its education results alongside Japan's, it should be able to. Of course, we want to compare student achievement nation-to-nation as well. Several other countries are using our National Assessment of Educational Progress science and math questions to assess their students' performance. This indicates to me that State-to-nation and nation-to-nation comparisons are not unthinkable. Furthermore, we have the IEA precedents.

Such comparisons supplement data from domestic studies and help us to monitor trends and changes over time. Domestic information alone simply does not provide a big enough picture. International information establishes the larger context; it puts domestic data in perspective. A nation may take satisfaction in the math gains its students are making, for instance. But there is little cause for pride if students in other countries are improving at twice the rate.

Americans have not always appreciated international information on education; at times we have been self-absorbed, even insular. We value it now, however, and we hunger for more information than is currently available. Education achievements in other countries provide benchmarks, standards, and goals for us. Japan, for instance, does something many Americans had not thought possible. The U.S. Department of Education's 2-year study found that the Japanese graduate an extraordinarily high percentage of their students from secondary school while simultaneously producing a very high average level of academic achievement. This study challenged our conventional wisdom. Contrary to the assumption of many in the United States, equality and excellence both can be achieved within the same system.

Another example where an international study "removed our

blinders" is the IEA's Second International Mathematics Study. It confirmed something we knew, that achievement follows content coverage and that students tend to learn what is taught. But the mathematics study also revealed something that many Americans never considered possible--that students can be taught complex mathematics at a relatively early age.

Cross-national research sometimes widens our horizon and suggests nonincremental means of improvement. The discovery that a number of other countries devote more time to schooling has helped stimulate debate in the United States about lengthening the school day and year.

International comparative studies can also indicate areas that need attention. The 1972 IEA reading and literature studies, for instance, showed that a major weakness among U.S. secondary students is comprehension. Preliminary findings from the new IEA science study show that U.S. students are far below their English and Japanese counterparts. With apologies to my British friends, let me observe that the U.S. is accustomed to lagging behind Japan, but we were, frankly, surprised by our scores in relation to the United Kingdom.

International comparisons of student performance generally stir debate in this country. They sometimes trigger initiatives and activities at the State and local levels. In the aftermath of the Second International Mathematics Study, for instance, a consortium of school districts in the State of Maryland was formed to examine the study results and to initiate reforms. An organization in the State of Minnesota, the "Mathematics Quorum," informed each school district in the State about the conclusions of the international study. Three other States--Virginia, Florida, and Iowa--conducted their own surveys of mathematics to compare themselves with other countries. The results helped Floridians develop a new geometry curriculum.

International information has helped to fuel efforts and debate about education improvements in the United States. I cannot help but think that it does (or could do) the same in other industrialized democracies, most of which are OECD members. Moving forward in matters of social welfare, economic growth, and cultural vitality is something that concerns all of us. And progress in each of these domains depends in no small part on improvements in education. At a time when technology has shrunk the globe--when TV, telephones, and jet travel have turned us into virtual next-door neighbors--we need, more than ever, to learn from each other, to benefit from each other's experiments and experiences, triumphs, and errors. We need to undertake collaborative efforts wherever possible.

Secretary Bennett and I are committed to this. The U.S. Department of Education plans to publish a study of teacher salaries in 15 countries and a volume of scholarly background papers and other original research from the Japan study. Early in 1988, we hope to publish a study of how different countries

offer parents various kinds of choices among schools. Choice is of particular interest to us; it is a natural mechanism for bringing accountability into the system, for making schools responsive to their markets. But this is just the start.

The upcoming reading literacy study by the IEA could set a new precedent for international cooperation if international data and domestic data are deftly coordinated. We hope that the samples and content from this study can be linked to our own national assessment.

We need more linkage and coordination like this. And we need more data on education around the world--more data and more kinds of it. We want a reliable way to chart education's percentage of the gross national product in each country--not just government expenditures on education; but all expenditures on education. Why can't this be done? It is among the most fundamental points of reference for comparing education systems and their relative performance and productivity. Another international blind spot is the curriculum. Can we not do a decent comparison of course content, subject-by-subject, across nations?

Some of the reasons why we lack international data are understandable. Countries organize their systems differently and measure things differently. Data on school dropouts, for example, are difficult enough to collect within the United States; it's exceptionally hard to get the 50 States to agree on definitions, on the elements that should be measured. Difficult as this may be, it is vital that we work out a way to do so, and not just here in the United States. Attrition and completion rates are among the essential indicators of health in any education system.

But if some of the reasons we lack international comparisons are reasonable, at least for the time being; others are disreputable. Too many countries--the United States has been vulnerable to this at times--have been uncooperative, resistant, uninterested or simply lazy. We need joint efforts to overcome these impulses and galvanize support for more valid, detailed, varied, and useful international information on education.

In the field of education, the organization best positioned to accomplish this (at least among the industrialized democracies) is the OECD. It already generates some useful data. We are glad to have these, but they are not enough. Should not a larger share of OECD's energies and resources be allocated to efforts to increase the quantity and quality of information on education around the world? In a word, yes! This responsibility ought to belong to OECD; no other entity is so well situated or qualified.

It is a difficult task, to be sure, both for the international organization that takes on such responsibilities and for the member countries that get involved. The United States has,

at times, been culpable of tardiness and incompleteness when filling out even fairly simple questionnaires sent by OECD. We vow to do better. We hope our colleagues will take the same oath.

But improving the quantity and quality of international information on education is not just a matter of completing forms and gathering numbers; it is also a matter of reaching agreement on which indices and gauges and definitions should be used--and how they can be used in ways that respect the differences in our several nations' education systems and that are useful also for international purposes.

The single most important yardstick for the performance of any education system is student outcomes, student achievement, and student learning. I think we all agree on that. Certainly it is information about outcomes--including comparisons among outcomes--that elected officials and policymakers primarily demand. But we also need statistics and research and measures of many more dimensions of our education systems--such as curriculum content, school organization, attendance, learning time, parent involvement, homework policies, retention and completion rates, enrollments in advanced courses and in college, the uses to which education revenues are put, performance in college, and other features of education systems. We need to gauge and describe the gaps between the intended curricula, the implemented curricula, and the attained curricula. We also need to look for links between student outcomes and those variables that parents and educators can control.

I refer to Harold Stevenson's finding that American parents are apt to attribute their child's learning to innate ability, whereas Asian parents more often believe it to be mainly a result of hard work (this, of course, is part of the reason Asian students learn more). Studies such as Stevenson's are doubly important, because they not only indicate differences in student achievement, but also probe factors that may explain part of the reasons for those differences. The Stevenson study points to a variable that lies at least partly within human control: attitudes are something parents and others can do something about, especially if they learn from international comparisons that different attitudes can be associated with better results.

I would like to see more studies like Stevenson's, and more analyses of data, analyses across subgroups, institutions, regions, nations, and other geographic and cultural boundaries. Such analyses can reveal weaknesses in an education system. They can also highlight features that could be most responsive to improvements, that is, those most likely, if modified, to yield increases in student outcomes.

This, finally, is the reason we have gathered: to determine what information is vital to all of us in our efforts to improve the education system and boost student learning in our countries. Not everything that is important to find out is amenable to

measurement; there are subtle qualities of mind and spirit that psychometrics cannot capture or express. However, much that we want to know can be quantified and gauged, and it should be. The whole field of testing and measurement is making great strides and will make more. We must not forget the immeasurables, but we must not slight what can be measured.

I urge you to consider all the possibilities. Each international indicator adds a piece to the picture of education. The more pieces we have, the clearer the picture becomes. A clear, accurate picture is critical to developing solid, effective education policies.

The indicators we can agree on and then generate will help determine the view of education we see and base our decisions on. These few days in Washington offer an opportunity to lay the groundwork that could lead to improvements in education for millions of children around the world for years to come. I wish you much wisdom and a measure of boldness!

3

SUMMARY REPORT ON CROSS-NATIONAL EDUCATION INDICATORS

OECD Secretariat

I. INTRODUCTION : BACKGROUND AND CURRENT INTEREST IN INDICATORS

1. Under the initiative and invitation of the U.S. Education authorities, and jointly organized with the OECD Secretariat, the international conference on education indicators took place on November 3-6, 1987 in Washington D.C. It was attended by national representatives of 22 member countries, as well as invited experts and observers from both the United States and other OECD countries. The reasons for the priority given to this area by the U.S. authorities were underlined by the U.S. Department of Education officials, Peter Greer, Deputy Under-Secretary for Intergovernmental and Interagency Affairs and U.S. member of the Education Committee, and Emerson Elliott, Director of the Center for Education Statistics, in their opening addresses. The need for information and bench-marks that might allow comparisons across countries on how well education is functioning in each was seen as an integral component of the improvement of its quality for all countries included. Though it emerged in the conference that there are national differences of priority concerning how schooling is to be improved, the importance of that broad goal and the need for information to support it were echoed repeatedly by country representatives. In his introductory remarks, Elliott also indicated the desire of the U.S. authorities for the meeting to reach concrete conclusions in the form of agreement on the need for further work in this field and on the areas on which this work should focus.

2. These themes were taken up and elaborated by Chester E. Finn Jr., the U.S. Assistant Secretary for Educational Research and Improvement, Counselor to the Secretary, and U.S. member of the CERI Governing Board, in his address on the evening of the first full day of the conference. He addressed the issues facing education reform in the U.S. organized around six "fronts" of the reform movement -- curriculum standards, school professionals, school effectiveness, equity (of outcomes and not only access), content knowledge, and accountability. The latter implies both information and consequences. There is need, he said, for more and better data on the progress of education in a wide array of areas. Data are needed at the individual student, classroom,

school, district, State, and national levels in order to provide feedback to planning improvement. He especially emphasized the value of using international information in order to establish a context through which to understand the domestic situation and to allow countries to learn from each other. The OECD, he regarded, is best positioned to undertake this, and should make it a priority of their educational activities.

3. George Papadopoulos, of the OECD Secretariat, placed the conference in the context of the long-standing commitment of Member countries to develop cross-national educational statistics. But it signaled a re-emergence of attention to indicators as such after the previous period, more than a decade before, of keen interest in this field. That period had been notable in OECD work by the agreement of high level officials at the Paris Conference on Educational Growth in 1971 to make goals more explicit and progress towards them measurable, following a decade of very rapid expansion, and the publication of Indicators of Performance of Educational Systems in 1973. Several delegates also placed indicators in the context of previous international work on this topic, welcoming renewed attention to education indicators and noting that the previous interest witnessed in the late 60s and early 70s had not been sustained in the following years. The major question for the conference and any subsequent work, Papadopoulos concluded, was whether the undoubted national interest in developing indicators could be translated into measures that would be meaningful internationally.

II. INDICATORS : CONCEPTS AND MEASUREMENT ISSUES

What are education indicators? How can they be used? What kinds of issues do they raise for various groups involved in education? What are the optimal components of a system of indicators?

4. This session was divided into three parts, with introductory papers by:

- Jeannie Oakes, The Rand Corporation, California, Education Indicators -- Concepts, Types, Uses;
- T.N. Postlethwaite, University of Hamburg and former Chairman of IEA, Methodological Issues on Indicator Development on the International Level
- P.H. Halsey, Department of Education and Science, England, Education Indicators: Concepts, Measures, and Educational Policy in England and Wales.

The respective discussants for these presentations were respectively Denis Meuret (France), Rory O'Connor (New Zealand), and Kjell Eide (Norway).

5. Jeannie Oakes, in her presentation, outlined some of the

different definitions and approaches that can be adopted for the development of indicators and some of the issues and problems that must be confronted in that development. Whether as single or as composite statistics, indicators cover key aspects of any education system. They may be developed as benchmarks of progress, as "bell weathers" to help show likely future change, as descriptions of central aspects of schooling, or as policy-relevant or problem-focused information. Though they aim to allow comparisons (across time, parts of the system, or countries), they cannot be unequivocal nor are they devoid of subjective judgment. This subjective element derives in part from the choice of the overall model or framework that determines how the different parts are seen to relate together to form the whole, and in part through value judgments about desirable outcomes and the best means of realizing these. She emphasized that, while there are formidable technical and political problems to be overcome in this field, indicators can bring new and relevant knowledge to bear on outstanding educational and political issues.

6. The discussion that followed covered a wide range of the complexities inherent in the development of educational indicators. Experience from a number of countries showed that current interest in the information furnished by indicators derives not only from the perceived inadequacy of traditional statistical measures but from increased external pressure for greater accountability. The need for measures that respond to this pressure should, some warned, be carefully defined according to the level of the education system or decision-making process involved. In this regard, the distinctions were made between global and disaggregated indicators and between measures that indicate how discrete aspects of the education systems are functioning and evidence of how these partial elements contribute to the overall well-being of that system. The close relation between considerations of quality and equality were identified as important in at least two respects: first, that indicators of outcomes should properly take account of the differential social intakes of pupils from one school or region to another, and of the differing environments outside schools that influence those outcomes; second, that measures expressed as averages should be complemented by those of the distribution of outcomes across the different social and ethnic groups that compose the school population.

7. Certain fundamental questions were raised in this session that arose repeatedly throughout the conference. How, if indicators are only one among several approaches to the assessment of quality and priorities for its improvement, can decision-makers avoid over-reliance on any single indicator, particularly as the political process is a far more complex one than the mechanical weighing of statistics and results? Should the range and number of indicators that might be developed internationally be broad or else restricted to a limited number in a few key areas? Several delegates argued in favor of a broad approach, both in order to accommodate the breadth of existing

educational objectives within countries and to allow choice between different measures according to divergent national goals and priorities. On the other hand, the view was also expressed that considerations of feasibility and of the uneven availability of information across Member countries suggest that efforts should focus on a few key indicators.

8. A dominant theme of Neville Postlethwaite's presentation on the methodological aspects of indicator development was that, important though the technical problems and caveats are, the paramount considerations in the international field are the conceptual framework to be adopted and the identification of the uses to which any measures are to be put. He directed many of his remarks to those indicators and measures that cannot be derived from regular, administratively-gathered statistics and which require surveys based on (sufficiently large) samples. Thorny methodological issues of comparison must be addressed and resolved. These include the need to ensure that "like is compared with like" (thus raising the question, for example, of whether modal grade level or age of student (or both) are to be used in defining the sample population) and that the requisite variables, even those that seem at first unproblematic (e.g. "participation" or "truancy"), be defined precisely enough to allow comparisons to be drawn. Students' achievement, despite the problems involved, were seen by Postlethwaite to be significantly more amenable to international inquiry than their attitudes. He elaborated some of the techniques that can be adopted in constructing tests that sufficiently reflect the curriculum of each country, while allowing relative cross-national mastery of knowledge to be assessed. Measures can also take account of differential retention rates in the form of "yield measures" of achievement.

9. The ensuing discussion covered both the methodological and political dimensions of indicator development. The particularity of practices and arrangements in each country was seen to imply that cross-national comparisons even of concepts such as enrollments or advancement rates could not be lightly undertaken. One delegate suggested that an implication of this is that further work should concentrate primarily on methodological issues rather than report actual results. The question of how broad should be the range of potential international education indicators again arose. Country differences were reported as to the existence of a national curriculum that might facilitate the delineation of clear bench-marks of knowledge, at least within a single country, and in several there is a tradition of decentralized curriculum planning, even if that is in some places open to review or change. The absence of a national curriculum, it was suggested, implies that particular care should be taken in defining international indicators of student outcomes. The view was also expressed that goals and cultures are so specific to each country as to render invalid cross-national measures of achievement.

10. Despite these problems, in turning to the political uses and dimensions of education indicators, it was agreed that

policy-makers would in any event use information and make comparisons using available indicators, irrespective of the riders provided by the research community. Therefore, it was suggested these indicators should be as extensive, reliable, and valid as possible. Part of on-going educational research activity might be set aside and closely tailored to the needs of policy making. The inherently political nature of this subject was also described in terms of "system dynamics" -- that education, as a human, creative enterprise, will always respond to the information that is generated about it, whether positively or negatively. That there should be a response was not seriously questioned -- the object of assessing how well schools function being, after all, to identify and implement possible improvements. Yet, there can also be distortions and negative responses and those should, as far as possible, be avoided. One delegate did suggest, however, that since there is no obvious decision-making authority corresponding to the field of cross-national inquiry, the risk of distortion is thereby reduced. Examples of possible distortions were given at various points during the conference. Drawing the distinction between information that is politically sensitive/relevant and that which is primarily of technical interest, several pointed to the (perhaps not unexpected) fact that there is considerably more demand for the former than the latter. In other words, there is most interest in precisely those fields where interpretation is likely to be contentious.

11. Philip Halsey's presentation concentrated on the national policy context of England and Wales. At the national level, a high current priority in that education system is the establishment of national standards and objectives. This is based on the dual premise that present achievement levels, while perhaps generally satisfactory, are neither as high as they could be nor as they need to be given the demands of the modern society and economy. Many of Halsey's remarks, however, addressed information and indicators needed at the school level, since a key assumption of present policies is that school improvement is crucially dependent on better local decision-making and enhanced parental choice, as well as more systematic assessment. This made it especially important, in his view, that that information be comprehensive. Correspondingly, his suggested model for indicator development, while sharing features with those proposed earlier by Oakes and others, differed significantly from them by locating the school at its centre, with information also needed on the inputs, the legislative and organizational framework, and the outputs -- each broadly defined. Like a number of other speakers, in this and other sessions, his conclusion was that recognized difficulties should not be a decisive obstacle to progress in this field.

12. Several delegates returned to the distinction between global and disaggregated, school-level indicators to emphasize that, while closely inter-related, they are not identical. A further distinction drawn was between short- and long-term time frames and the related dichotomy of statistics and research. It

was noted that an international organization such as the OECD should be strategically placed to span the divide between responding to immediate demands for knowledge and the long-term development of that knowledge base. Speakers emphasized that not all policy-relevant questions are amenable to routine measurement and response. One objective for further work in this field might, it was said, be the production of guidelines for the research community so that "new versions of the wheel do not have to be repeatedly reinvented." The passage of time was identified as raising some of the particularly pointed questions to be addressed in this area and not only because the research process in frequently too slow to generate immediately usable results. One speaker argued that, insofar as measures could be validly defined in order to establish trends in pupil performance, this in itself should suggest that education systems are not sufficiently responsive to the rapidly changing environments in which they are located. The more valid the measure, in other words, the less satisfactory the responsiveness of schools.

III. INDICATORS OF THE OUTCOMES OF EDUCATION

What are the best sources of data on student performance in schools? What are the major issues regarding comparability of scores across countries? What other outcomes of schooling need to be explored?

13. This session was divided into two parts with introductory papers by:

- Alan Purves, Chairman of IEA, Student Performance - IEA Studies; and

- Colin Power, Flinders University, Australia - Outcomes - Other Possible Measures

The discussants of these papers were R. Charters d'Azevedo (Portugal) and Esse Lovgren (Sweden), respectively.

14. Alan Purves presented a paper on the experience and expertise embodied in the IEA. It has significantly developed the assessment of student performance against a background of home, school, teacher and student variables as well as measures that can be used locally, nationally, and internationally. It has an ambitious long-term program with studies in different knowledge and subject areas already envisaged almost up to the year 2000 that will involve the development of new tests, indices, and scales. He responded specifically to possible criticisms of the IEA enterprise, especially those that maintain it is insufficiently sensitive to the cultural and curricular particularities of different countries. He described the efforts undertaken to develop valid cross-national measures, and emphasized that standards are not imposed on countries through IEA's work. Rather, each country decides those levels or standards for themselves.

15. As well as discussing methodological and political issues of the kind already mentioned, the conference also addressed here a number of other wide-ranging questions. Did the IEA process or mechanism offer a model for more extensive international activity in this field? Could IEA measures be readily converted into international indicators and could this be done without a major injection of permanent staff and resources? Are cross-national measures of student achievement feasible and useful? Divergent national views were expressed on this point. Should the knowledge and skills measured relate only to schools and school systems? Certain delegates regarded that definition of the field, particularly in a system such as the German dual model where vocational training and apprenticeship are an integral component of the education system, as overly restricted. A point that was underlined several times during the conference was that there already exists through IEA work a significant body of measures and expertise that would obviate the need to develop all indicators completely anew.

16. Colin Power's presentation on indicators of outcomes other than those of student achievement reiterated the general view -- that there is a definite need for indicators and for more comprehensive information yet particular care must be taken to avoid misuse and misinterpretation. The value of indicators, Power argued, is that they provide signals of outstanding questions to be resolved or potential problems that can then be subjected to more intensive scrutiny. Specific indicator areas that might be further developed were presented under the following headings -- participation, educational attainments, measures of equity, attitudes towards education, quality of school life, socialization measures, and preparation for life. Not all the suggested indicator areas would necessarily be suitable for regular monitoring and might instead be addressed through periodic surveys. Either way, Power emphasized the practical need to identify statistics and indicators already available as a precondition of agreement on priorities for further developmental work.

17. That levels of educational participation are bench-marks that often carry the possibility of substantial political impact was reported by a number of countries though against the background of the importance of defining exactly wnat "participation" is, and in which programs. The participation of different social groups of the student body is one priority area, it was agreed, but indicators might equally show what is specially available for minority groups in addition to their participation in mainstream provision. Participation in such extra-curricular activities as, for example, museum-going might usefully be considered. There might be an incompatibility of different goals for improving participation levels of under-represented groups, such as lowering drop-out rates in schools and increasing enrollment levels in third-level education, that could render problematic the interpretation of measures. Given that a substantial body of statistics and information on

educational participation exists in many countries, the task for further work might most usefully be to choose among available measures with comparability considerations uppermost, one delegate suggested.

18. There were a number of specific recommendations made for possible directions of further work. One that emerged, particularly from those representing francophone counties, was that progress of a statistically "fictitious" cohort through the education system can be assessed and compared using available statistics that would show flows and attrition, taking account of such factors as migration and death rates. Even so, cross-national comparisons would probably not be able to reflect adequately differences in curriculum contents as opposed to similarities and differences of career paths. Another delegate warned of linking indicators of participation too closely with access to, and acquisition of, qualifications, that are multifarious and often highly country-specific. Completion rates of education cycles could well provide a more meaningful alternative, he suggested. What happens to students after they leave schooling -- in terms of entry to employment, to post-secondary education and training, and to life-long learning opportunities more generally -- was regarded by several as important areas that risk being neglected if there is an overly exclusive focus on schools and schooling.

IV. RESOURCES FOR SCHOOLING

What are the difficulties in measuring and comparing fiscal resources across countries? Can a "fiscal effort" index be devised that will account for international differences in economies, currencies and population sizes? What other resources, such as time devoted to learning, need to be explored? What does research tell us about how other resources affect the quality of schooling and the learning outcomes for students? Are comparable data across countries possible to obtain?

19. This session was divided into two parts with introductory papers by:

-- Francois Orivel, IREDU, University of Dijon, Resources -- How Much/How Many?

-- Linda Darling-Hammond, The Rand Corporation, California, Resources -- How Good/How Well Used?

The discussants of these presentations were, respectively, Frederick Plank (Austria) and Eric Bolton (U.K.)

20. Francois Orivel focused his presentation on a number of the methodological issues that arise with the measurement of educational resources and that should be confronted in the effort to refine and develop indicators of them. The refinement of

these indicators, he argued, is especially necessary during this period of budgetary constraints when education ministries need to be able to defend themselves against pressure for further cutbacks (though one delegate queried whether good measures of, for example, educational spending as a share of GNP would achieve this end). The very concept of expenditure is not always clear -- apart from direct spending on such items as buildings and equipment, there are indirect items such as food and transport, other efforts (e.g. time spent by parents on homework) that frequently escape notice, as well as the earnings foregone factor when individuals extend their education. The public/private distinction, both in terms of institutions and expenditures, is also conceptually fraught, and decisions must be made about what should be included under each. This applies particularly to international comparisons since countries often use different concepts and accounting mechanisms for both public and private outlays. Differing cost burdens must also enter the picture of the total resource effort since these determine, to some degree, expenditure levels. Concerning the indicator of teacher salaries, Orivel showed how many factors enter the comprehensive assessment of remuneration, including the comparison of teachers with other occupations, which should, he asserted, assess absolute sums over a career with cost of living discounted. While analysis of teacher remuneration is certainly possible, Orivel noted, it is both a very sensitive area politically and not necessarily the best indicator of the attractiveness of teaching.

21. The discussion raised numerous technical points and particular country practices concerning measurement and accounting were reported. Many delegates agreed both that international efforts in this area are worthwhile and that definitional/methodological questions need to be clearly addressed to avoid serious misinterpretation. Several expressed doubts about the validity of ad hoc surveys and "grass roots" data of, for example, family expenditure in order to gauge private spending. More than one speaker also placed priority on the need to link expenditure data to outcomes in order to derive measures of efficiency and effectiveness. The difficulty of so doing was not underestimated nor the complexity of interpretation, faced with the apparently contradictory message from research that financial resources are both one of education's crucial ingredients yet alongside a surprisingly weak correlation between differences in spending and in measured outcomes.

22. A number of very specific topics were also addressed. Attention was given to trends in pupil-teacher ratios and their adequacy as measures of teaching resources, (compared with others such as average class size), as it was to teacher supply and the foreseen shortages in some countries in certain school subjects. The level of tuition fees, the degree to which this acts as a barrier to student participation in further education, and the redistributive impact (or lack of it) of education, were raised as possible subjects for indicator development. Spending on

recurrent education and training was viewed as an area supported by a notoriously weak data base yet representing a vital part of overall learning opportunities. And another suggested that one interesting indicator of "healthy" educational expenditure would be the proportion spent by a system on innovation or on developing new channels of information.

23. Linda Darling-Hammond discussed the "qualitative" aspects of resources under three main headings: teachers (Who? What? How used?), time (for instruction, in relation to teachers and students and for interaction between them), opportunities to learn (the application of the curriculum to different groups of students). Darling-Hammond organized her presentation around a number of indicator areas that could elicit further interest, though she drew attention to those that appeared more suitable to research inquiry or to national, as opposed to international, development. Concerning teachers, she argued that certain areas, such as certification and teacher behaviors, are either extremely complex or subject to widely differing practices. Teachers' background education, experience, and in-service education should all enter the description of overall teacher resources, and priority should be given to how schools use teachers for instruction, with "who gets the good teachers?" (the equity issue) an important additional aspect. The time factor was seen as worthy of further work, though again with certain areas, such as homework and how time is actually spent in class, presenting formidable complexities, as does the concept of "opportunities to learn". Darling-Hammond considered that class and school size could well be investigated as indicators of the "personalization" of education.

24. High quality teaching was underlined in the discussion as perhaps the key resource available to schools and a number of the findings about what is known about effective teachers was reported -- mastery of subject matter, effective management of learning, high expectations for all pupils and for themselves, an affinity for young people. How readily these can be translated into guidelines and indicators is far from clear and a long-term enterprise, however, though the target group for improvement, it was suggested, should be the large group of teachers who are at neither extreme of the excellent or very weak. The long-term nature of inquiry and the need for research into the issues discussed during this session were reiterated by several speakers, whether it was concerning the teacher's changing role in the light of alternative sources of information and the media, or in ascertaining relationships between inputs and outputs. One delegate emphasized the need for further work on school principals though Darling-Hammond considered the evidence on effective school leadership to be so various as to cast doubt on this specific topic as one suitable for indicator development, especially at the international level.

V. THE CONTEXT WITHIN WHICH SCHOOLING TAKES PLACE.

What are the external factors that most affect the learning environment? Which of those factors can or cannot be altered by governing entities? What information would be most useful to help decision-makers institute policies that could have the most positive impact on learning outcomes?

25. The paper introducing this session was given by James Coleman of the University of Chicago, with Alan Ruby, Department of Education, New South Wales, Australia, as discussant.

26. James Coleman located consideration of the relative influence of schools and family background in the recent history of discussion of this topic, in which his own report in the 1960s had had a decisive influence. Evidence shows that schools are more effective for those from "good" backgrounds. The interactions between these various influences are as worthy of attention, he asserted, as their "independent effect" -- when there are few available educational resources, their level and use have considerably greater relative impact than when an education system is highly developed. In the latter case, it is the favorable family background that is the "limiting factor of short supply" determining the interaction between the two and hence the critical ingredient of the two for outcomes. This he termed "social capital" (in contradistinction to the economic concept of "human capital") and this was defined as the norms, values, and relational structures that reside in the family and wider community. His research had indicated that a supportive community can compensate for the lack of "social capital" within the narrower ambit of the family. A major worry he had was the widespread destruction of that "social capital", both in families and, even more, in communities. Concerning indicators, Coleman argued for the usual measures of the "human capital" of families to be complemented by those of "social capital".

27. Various speakers underlined the importance of this broad area as being indispensable if the "net" value of schooling is to be properly ascertained. The need to incorporate measures of poverty, and the question of whether statistics should be disaggregated by the ethnic/cultural origin of students, were recognized as important though highly sensitive questions. The problems faced by certain immigrant and minority youngsters, and the impact these have on their schooling, were, however, undoubted. How far there should be direct public interventions in the "private" lives of families and communities, or whether the role of policy is that of facilitating choices was raised as a question and one speaker identified the exercise of choice as the essential feature of "capital" of whatever sort. On the other hand, another speaker pointed to the possible contradiction between enhancing individual choice and stemming the destruction of "social capital", since the individualism of the former had been identified by Coleman as a very cause of that destruction. Coleman attested that competition can have very beneficial or

harmful effects and that its exercise within a cooperative setting is much more effective than individual competition.

VI. CONCLUSIONS

28. The final session provided delegates with the opportunity for expressing their general conclusions and observations derived from the meeting, to consider how the ongoing work in the OECD, both on educational statistics and in other fields, could be exploited and further developed, to react to a working list of indicator items circulated during the meeting, and to suggest how the results of the conference could be followed up in the future.

29. The general comments of delegates reflected a range of opinions as to the value and uses of indicators, and matters of comparability and priority, though there was a broad measure of agreement on the value of further work on indicators. These comments included the following:

-- Several Member countries expressed strong interest in student cognitive achievement indicators, citing the needs of education ministries and other policy-makers for this type of performance measure and the eagerness of the general public to obtain such information. Others did not find student cognitive achievement a matter of priority or primary consequence. However, there appeared to be broad agreement on the usefulness of indicators of student participation, student completion of cycles and of equal opportunity for educational services as key measures of the performance of education.

-- The "health" of education -- that indicators measure -- is perceived differently from country to country and inextricably linked to the goals in each. Even so, much useful exchange of data and information can take place even in the absence of international concurrence on such values or goals.

-- The needs of Member countries differ, and the uses of indicators exchanged among them would differ accordingly. The general feeling of the conference was that a number of countries expect to find sufficient benefits from the exchange of indicator data, and of the methods and measures used, that efforts should be made to develop selected international education indicators. Indicators can be useful for comparative purposes by helping to identify features or circumstances in a country that might be examined more closely for modification or improvement. The significant comparison in this case may be the relative

rates of change of results over time from one country to another, rather than direct comparisons of absolute levels or rates. But for some countries, selecting indicators and collecting data may also be of assistance for national planning or evaluation and these may well value most the exchange of information on concepts, methodologies, and methods for this purpose.

-- Concerning the responses of the delegates to the working list of indicator items circulated during the meeting, the items rated as higher priority clustered into two areas -- first, outcomes indicators on student learning performances, participation and completion; second, indicators of school processes and curricular offerings. The items given low interest clustered into the area of socialization, such as indicators of school delinquency or substance abuse at school.

-- Several additional indicators were suggested by delegates and numerous notes, comments, and clarifying statements were added to the original list of items. These notes should prove most useful in follow-up work by Member countries.

-- Certain of the fundamental observations made throughout the conference -- the dependence of indicators on particular values and models, the need to distinguish statistics and research, whether to develop a broad or narrow range of indicators, the need to be clear about the level of education being addressed and uses to which indicators are to be put -- were also reiterated in the concluding session.

30. Monique Solliliage, of the OECD Secretariat, described the statistical activities and data bank at the OECD, the degree to which these already generate some of the indicators discussed at the meeting or to which the data bank could be so used if desired, as well as some general observations about international comparisons of statistics and indicators. George Papadopoulos complemented this presentation by reference to other activities of the Education Committee and CERI that have produced, or will in the future, indicators and comparable findings on specific topics -- e.g. teachers, the educational attainment of the labor force, the educational experiences of migrant and minority children -- that might also contribute to further work on indicators.

31. Educational statistics already calculated for publication by the OECD, were presented by Monique Solliliage in describing the forthcoming volume, Education in OECD Countries in 1984-85, A Compendium of Statistical Information. In that publication, differences and similarities among countries are to be

highlighted. (Information to be included was listed in full in a paper prepared by the Secretariat for the conference). Very broadly, the following were described:

-- Pupil enrollment in relation to population by level, full- and part-time, sex, general and technical/vocational, and changes 1983/84 to 1984/85;

-- GDP devoted to public expenditure on education and expenditure by level of education and per pupil;

-- Teacher full-time equivalents by sex and level;

-- Student enrollment at the third-level showing new entrants, age, and sex;

-- Enrollment rates by single year of age;

-- Qualifications (or completions) at the second-level, general and technical/vocational and those eligible for access to third-level by sex and completions at the third-level;

-- Expenditures by public and private sources by current and capital and purpose (administration, teaching staff, books, etc.) and showing change, 1983/84 to 1984/85.

Other areas that are covered, at least partially, by the annual gathering of statistics through the joint OECD/UNESCO/SOEC questionnaires and other sources and that might be further developed include:

-- Completion rates for compulsory schooling;
-- Post school experience;
-- Fiscal effort (expenditures in relation to GDP);
-- Student financial aid for post-compulsory schooling;
-- Pupil-teacher ratios;
-- Population projections;
-- Unemployment rates;
-- The "tracking" of students into different branches;
-- Age of starting and end of compulsory schooling.

32. Delegates welcomed improvements already made in OECD statistical data collection and reporting in the field of education and suggested that this improvement be fully continued in the future. They were reminded that a precondition of good data and up-to-date reports is the rapid and full completion of the annual questionnaires. Special attention was urged for more complete descriptions as to how each country's statistics compare with standard OECD definitions in order that indicators and statistical tables be well understood by all who use them. Hence, conference participants supported suggestions for additional and continuing attention to educational statistics through a regular mechanism to update and revise existing items as well as to add

new measures. OECD should also give assistance to countries on definitions, data "crosswalks" and related technical matters, with emphasis on making the data comparable. The Secretariat described plans for a forthcoming meeting of national statistical experts to review statistical items, comparisons, reports, and country contributions. The details of this meeting have not yet been finalized but it is envisaged for the first half of 1988. It will be the first of its kind in some years.

33. Not all the areas that were under consideration at the conference correspond to the regular data collection undertaken by the OECD, nor are they necessarily amenable to this form of compilation. One representative described current OECD activity in this field as a data collection that is stronger on "quantitative" than "qualitative" reporting. Subjects not covered by the OECD questionnaires but that might be appropriate for future indicator development as discussed at the conference include:

-- Student achievement;
-- Community expectations;
-- Resources for disadvantaged students;
-- Private expenditures on vocational education;
-- Supply and demand for student "places" in vocational program;
-- Teacher characteristics;
-- Resources for school activities in addition to teacher salaries;
-- Teacher attendance and turnover rates;
-- "Opportunity to learn" in selected curricular areas;
-- Diversity in the school population;
-- Substance abuse in schools;
-- The use of time at school;
-- Teacher "in-service" training.

34. A number of the concluding remarks addressed one or more of the above areas in terms of potential follow-up work on education indicators in the international context. These suggestions included:

i) The need to develop comparable data on student achievement, the quality of teaching, teacher characteristics, and school level context and processes;

ii) There could be a very useful international study on what each interested Member country regards as adequate schooling and how that adequacy is judged or assessed;

iii) Studies under the auspices of IEA (International Association for the Evaluation of Educational Achievement) may be the most appropriate way to advance reporting on many aspects of student achievement as well as school, teacher, and curricular issues related to achievement. Closer links between the work of OECD

and the IEA would be desirable as well as possible bi- and multi-lateral relations between national assessment agencies and/or inspectorates and the OECD.

iv) OECD's education research arm, CERI, should be well placed to examine issues of curriculum content, country-by-country, again as a means for broadening and deepening the store of qualitative data on schooling.

35. Concerning procedural steps to be taken to build on the interest and progress of the Washington conference, George Papadopoulos for the Secretariat reported that the summary report of the conference (this document) would be distributed to the Education Committee at the end of November 1987, for discussion and their agreement on follow-up work within the Committee's activities. In addition, the Education Committee would be considering, at the same meeting, proposals for future work on the Quality of Schooling that overlap substantially with many of the subjects and issues discussed at the conference. He also reminded delegates of the proposed 1988 meeting envisaged on educational statistics, of the other activities that could well contribute particular expertise and indicators to the overall effort, and the potential role of CERI for further research and development on several of these topics.

36. A number of procedural steps for the follow-up work was suggested by delegates. These included:

i) The OECD should devise mechanisms and procedures, and should devote the requisite resources, to support the development of education indicators in addition to its regular statistical data collection and reporting. The latter should be prompt and up-to-date and made subject to ongoing review on a regular basis;

ii) A task force of representatives of interested Member countries could be established to draw up and refine proposals for indicators and follow-up actions, with the aim of re-convening a forum along the lines of the joint OECD-US Washington conference.

iii) The OECD, through a task force such as the one referred to above, could develop a tentative list of indicators, sufficiently broad to encompass varying interests, and circulate it for comment by Member countries;

iv) Special bi-national or multi-national groups could be created to carry out developmental work on specific indicators, or clusters of indicators, according to their special interests. There should be the possibility for different countries to take the lead (through funds, staff, meeting sponsorship) for specific indicators or clusters, corresponding to those interests.

v) A "learning network" of correspondents from Member countries could be established which would maintain communications on issues of mutual interest in planning, decision-making, and evaluation as well as matters of comparability;

vi) The OECD Secretariat and Member countries should fully exploit the potential of existing international computerized links for data exchange and remain abreast of future developments.

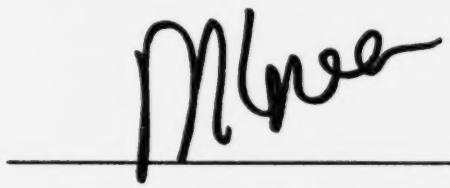
vii) Supplementary resources should be sought for future work but the absence of such resources should not prevent progress in this field. The matter is of sufficient importance that some reallocation of existing resources would, if necessary, be warranted.

EPILOGUE

Peter R. Greer
Deputy Under Sectretary for Intergovernmental and Interagency Affairs

During the concluding discussions of the Washington Conference, it became clear that there is widespread interest in education indicators. Also, there is general agreement that the task of developing these indicators will be complex and will have to take into consideration the different organizational patterns and practices in education of the interested countries.

The recommendations of the Washington Conference were presented to the OECD Education Committee and the Governing Board of Center for Educational Research and Innovation (CERI) in November and December 1987. Responsibility for further development of the conceptual issues was assigned to CERI while further development of educational statistics and policy issues was to be continued by the Education Committee. In addition, the French Ministry of Education offered to host a second meeting, in the spring of 1988, to continue the process of developing comparable international education indicators. Also, the U.S. Department of Education agreed to provide further support to the OECD Secretariat to make available additional staff resources to assist with the project.



Peter R. Greer

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AGENDA
International Conference on Cross-National Education Indicators

ARRIVAL (Tuesday November 3, 1987)

3:30 - 5:30 p.m.	Registration,	Ramada Renaissance Hotel
7:00 p.m.	Reception	

WELCOME TO THE CONFERENCE

Emerson J. Elliott, Director
Center for Education Statistics
U.S. Department of Education

WEDNESDAY, Nov. 4 — Pan American Health Organization Building
525 Twenty-Third Street, N.W.

9:00 - 9:20 a.m. — INTRODUCTIONS AND OPENING REMARKS

Peter Greer, Deputy Under Secretary for Intergovernmental and Interagency Affairs
U.S. Department of Education

George Papadopoulos, OECD Secretariat
Deputy Director for Education, OECD

Emerson J. Elliott, Director
Center for Education Statistics
U.S. Department of Education

SESSION I — **INDICATORS: CONCEPTS AND MEASUREMENT ISSUES -**

What are education indicators? How can they be used? What kinds of issues do they raise for various groups involved in education? What are the optimal components of a system of indicators?

Chairman: Wilmer Cody
Council of Chief State School Officers

9:20 - 10:15 a.m. — Presentation:

Jeannie Oakes
The Rand Corporation

"Education Indicators--Concept, Types, Uses"

(A broad conceptual introduction to the notion of education indicators raising issues about their use, and potential misuse at various levels with particular attention to international concerns)

Discussion

How well do these concepts apply to other OECD countries?

10:15 - 10:30 a.m. — Coffee break

10:30 - 12:00 noon — Presentation:

Neville Postlethwaite
University of Hamburg

"Methodological Issues in Indicator Development on the International Level"

(Examples of major technical issues facing an attempt to derive comparable data across the OECD countries)

Discussion

12:00 - 1:30 p.m. — Lunch Break

1:30 - 3:00 p.m.	Presentation: Philip Halsey, Deputy Secretary, Department of Education and Science, United Kingdom "Education Indicators: Concepts, Measures and Educational Policy in England and Wales" Discussion
3:00 - 3:15 p.m.	Coffee break
SESSION II	INDICATORS OF THE OUTCOMES OF EDUCATION - What are the best sources of data on student performance in school? What are the major issues regarding comparability of scores across countries? What other outcomes of schooling need to be explored? Chairman: Herbert Walberg University of Illinois
3:15 - 4:30 p.m.	Presentation: Alan Purves, Chairman, International Association for the Evaluation of Educational Achievement "Student Performance - IEA Studies" (What are the short and long-term issues concerning the potential for use of IEA studies as a source of an outcome measure and whether the countries can, in the future, work toward certain shared test items in their own testing programs as an alternative to or supplement to IEA studies?) Discussion

4:30 - 6:30 p.m.	BREAK	
6:30 - 7:00 p.m.	RECEPTION AND CASH BAR	Ramada Renaissance Hotel
7:00 p.m.	DINNER	
8:00 p.m.	SPEAKER: Chester E. Finn, Jr. Assistant Secretary for Educational Research and Improvement and Counselor to the Secretary	
	Address: "U.S. Education Reform and International Data"	

THURSDAY, NOV. 5

9:00 - 10:30 a.m.	Presentation: Colin Power Flinders University, Australia "Outcomes - Other Possible Measures" (What are the important outcomes of schooling other than cognitive achievement? The discussion may include traditional indicators such as completion of school, enrolling in higher education or additional training and non-traditional measures such as attitudes) Discussion
10:30 - 10:45 a.m.	Coffee break

SESSION III	**RESOURCES FOR SCHOOLING - What are the difficulties in measuring and comparing fiscal resources across countries? Can a "fiscal effort" index be devised that will account for international differences in economies, currencies, and population sizes? What other resources, such as time devoted to learning, need to be explored? What does research tell us about how other resources affect the quality of schooling and the learning outcomes for students? Is comparable data across countries possible to obtain?**
	Chairman: Stephen Heyneman, Chief Education and Training Division The World Bank
10:45 - 12:00 noon	**Presentation**
	Francois Orivel IREDU, University of Dijon
	"Resources -- How Much/How Many?"
	(What cross-national comparisons of educational finance can be conducted? What provisions are made for measurement of human resources such as teacher supply, pupil/teacher ratio, teacher/administrator ratio?)
	Discussion
12:00 - 1:30 p.m.	**Lunch Break**
1:30 - 3:00 p.m.	**Presentation:**
	Linda Darling-Hammond The Rand Corporation
	"Resources -- How Good/How Well Used?"
	(What are some measures of teacher quality, time use, and opportunity to learn that might be used cross-nationally?)
	Discussion
3:00 - 3:15 p.m.	**Break**

SESSION IV	**THE CONTEXT WITHIN WHICH SCHOOLING TAKES PLACE - What are the external factors that most affect the learning environment? Which of those factors can or cannot be altered by governing entities? What information would be most useful to help decision-makers institute policies that could have the most positive impact on learning outcomes?**
	Chairman: Raimund Ritter Federal Republic of Germany
3:15 - 4:30 p.m.	**Presentation:**
	James Coleman University of Chicago
	"Student Population Characteristics and Other Environmental Factors"
	Discussion

FRIDAY, NOV. 6

SESSION V	**FINAL SUMMING UP OF NEXT STEPS TOWARD INTERNATIONAL COOPERATION - What have we heard in these deliberations about the feasibility of cooperation in this endeavor? What technical steps need to be taken to collect, exchange and analyze comparable data across countries? How will that role be implemented?**
	Chairman: Emerson J. Elliott, Director Center for Education Statistics U.S. Department of Education
9:00 - 10:15 a.m.	**Discussion**
10:15 - 10:30 a.m.	**Coffee break**
10:30 - 12:00 noon	**Plenary Session**
12:00 noon	**End of Conference**

B

PAPERS
International Conference on Cross-National Education Indicators

Darling-Hammond, Linda, "Resources for Schooling: Teachers, Time, and Opportunities to Learn"

Eide, Kjell, "The Need for Statistical Indicators in Education"

Halsey, P.H., "Educational Indicators: Concepts, Measures and Educational Policy in England and Wales"

Orivel, Francois, "Some Thoughts and Suggestions for Drawing Up Internationally Standardized Indicators for Resources Allocated for Education"

Postlethwaite, T. Neville, "Methodological Issues in Indicator Development at the International Level"

Power, Colin, "Indicators of Outcomes of Education Other than Cognitive Achievement"

Purves, Alan C., "Student Performance as an Educational Indicator"

C

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